UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
4147	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

	Application No.	Applicant(s)
Office Action Summary	10/583,077	SPINDLER ET AL.
	Examiner	**Art Unit**	
	SANTIAGO GARCIA	4147	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 June 2006*.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-26* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-5,8-15,18-26* is/are rejected.
7) ☒ Claim(s) *6,7,16 and 17* is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *15 June 2006* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☒ All b) ☐ Some * c) ☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because: Drawings do not have descriptive text. For example Fig. 10 component 14 should be labeled synchronizer or synch means. BS signal should be labeled Sync Start Signal. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: the term modulation is used in an incorrect way. The specification does not describe modulation in the standard definition of the term modulation. Drawings show modulation by different pulse widths which is not a standard use of the term modulation. Correction is required.

Claim Objections

3.   Claims 6-7, 16 and 17 are objected to because of the following informalities: The term modulation is not used in the correct manner. The specification does not describe modulation in the standard definition of the term modulation. Drawings show modulation by different pulse widths which is not a standard use of the term modulation. Also in claim 6 and claim 16 there is no "the modulation degree" in any of the prior related claims. Appropriate correction is required.

4.   Claim 1 is objected to because of the following informalities: the term "and!" needs to have the exclamation point deleted. Appropriate correction is required.

5.   Claim 20 is objected to because the inventory command is sent twice which is not needed. The inventory command is already sent in the phrase "the device transmits an inventory command" then later in the claim the phrase "upon which the reading device sends the inventory command". There is no need to send the inventory command twice. Appropriate correction is required.

6.   Claims 8 and 12 are objected to because of the following informalities: Claim 8 has the phrase "no or no" that needs to be corrected, for the purpose of examining "no or no" will be taken as "no". Claim 12 has the term "the inventorizing commands" which is not mentioned prior to claim 12. Neither from the claim itself nor from the description is it clear what is meant by "to register the inventorizing command." Also in claim 12 the expression "asked to report…to send in a data frame…" is not clear as well. Appropriate correction is required.

7.   Claim 11 is objected to because of the following informalities: The phrase "and /
or" needs to be corrected to an "or" or an "and". Appropriate correction is required.

8.   Claim 20 is objected to because of the following informalities: The phrase "and /
or" needs to be corrected to an "or" or an "and". Appropriate correction is required.

9.   Claim 22 is objected to because of the following informalities: The term "delay
selectable" is not defined in the specifications. Also the extensive use of the word
"which" makes the claim hard to understand. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 20-26 rejected under 35 U.S.C. 102(b) as being anticipated by WO

99/60510 to Roz Thierry et al published on November 25, 1999.

20. As per claim 20:

An anti-collision method for determining a number of transponders in

an effective area of a reading device, comprising the providing of at

least one reading device and a number of transponders in which the

reading device communicates with the transponders without contact

by means of modulated electromagnetic signals, (Roz, fig.1 and

Abstract)

which contain data and or commands packed in data frames (Roz, fig.

7b INT is the data frame which has data or commands;) **in which the reading**

device transmits an inventory command for determination of the

transponders present in its effective area, by which command each

transponder present in the effective area of the reading device is

asked to transmit a response with a unique identification number to

the reading device, (Roz "Generally, you unit of reading 20 with the possibility of typically questioning the Tri transponders put in awakening by emitting a signal of interrogation INT comprising in a modulation of the electromagnetic field 1. This signal of interrogation INT indicates to the TRi transponders that the unit of reading 20 wishes to receive a signal of REPj

answer including understanding required information, typically an identifying code of the transponder." By the reader needing to understand the ID code the reader is doing invenorizing.) **upon which the reading device sends the Inventory command in a data frame which contains synchronization information (Preamble, Start Delimiter) for synchronization with the transponders,** (Roz, Fig. 7b and 7a shows the data frames going from TR1-4 to device 20 which is the reading device. INT contains both the preamble and delimiter to get the RFID tag communication started. "According to the present invention, the signal of interrogation INT comprises in *particular a sequence allowing the synchronization* of all questioned the TRi transponders. According to an embodiment particular of the present invention, it is considered that the signal of interrogation INT includes/understands *a code stock also,* i.e. a sequence common to a family of transponders, for example a portion of their identifying codes, so as to thus allow a preliminary sorting of the transponders put in awakening." A sequence allowing synchronization is the preamble and the code stock is the start delimiter.)

when the transponders synchronize with the reading device with the

help of the synchronization information contained in the received data

frame, (Roz, "The TRj transponder comprises moreover means of extraction of clock

312 providing to logical of control 302 a clock signal CLK derived from the frequency of

the electromagnetic field 1 transmitted by the unit of reading 20. The encoding of

information is thus carried out of synchronous manner for each transponder.") **in**

which the reading device transmits a repeat command in case there

are mutually colliding responses from several transponders (Roz, fig.5:

510 Collision interrogator to 511 Indicates the collision to 512 Emits the SHIFT signal to

518 which repeats the command to synch again.) **which command causes the**

transponders to send the response once more (Roz, 518 causes fig 6 609

to occur more times.) **and in which the reading device on the transponder**

whose response was received without errors, (Roz Fig 5: 510 collision

detect going to 560 SLOT control unit going to 514 memory then going to

516 which emits response without errors.) **sends a Confirm command,**

which causes this transponder not to react to repeat commands, (Roz,

fig. 5: 516 which emits response without errors to fig.6 612 receiving the

repeat command and going to 614 causing the tag not to react again.) **in**

which the reading device continues transmission of Confirm

commands and Repeat commands,(Roz fig.5 looping from 516 confirm

command or 511 repeat command looping back to 502 INT emission.) **until**

no transponder responds any longer within a specified interval, (Roz,

Fig.7b shows the signal MUTE which is repeated in the specified interval of

the SLOTS1-SLOTS8 until it finds no more success frames being

transmitted.) **in which the reading device transmits the Repeat**

commands and / or the Confirm commands in data frames which do

not contain synchronization information. (Roz, This reference only

mentions synch information in INT command and not in the SHIFT or

MUTE command.)

21. As per claim 21:

Roz teaches:

An anti-collision method as claimed in claim 20, in which the transponders respond to the reading device at randomly selected delays. (Roz, "Moreover, owing to the fact that the top signals of answer are transmitted with intervals of random times," The signals of answers are by the transponder which select SLOTS1-8 at random times.)

22. As per claim 22:

Roz teaches:

An anti-collision method as claimed in claim 21, in which the delay selectable by the transponder lies in a round, (Roz, Fig. 7b) **which has a number of time slots which are pre-defined and possibly variable by the reading device with durations,** (Roz, Fig. 7b SLOT1-SLOT8 are pre-defined. Thus, in accordance with what is schematized in figure 4, following the emission of the signal of interrogation INT by the unit of reading 20, a whole of N fentres SLOTk (k=l with N) is generated. Each TRj transponder includes/understands means to select, according to a random process, a fentre of particular answer among 1 ' whole of N fentres of available SLOTk answers during which it will emit its signal of REPi answer.") **which are defined and possibly variable by the reading device. (**Roz, "INT by the unit of reading 20, a whole of N fentres SLOTk (k=l with N) is generated.**")**

23. As per claim 23:

Roz teaches:

An anti-collision method as claimed in claim 22, **in which the reading device transmits nothing more than a Confirm command or a Repeat command per time slot,** (Roz, Fig. 7b MUTE and SHIFT commands are coming from the reading device per time slot.) **where a time slot is optionally early scheduled by these commands.** (Roz, INT would be considered as the early time slot. Early time slot is not mentioned in the specification.)

24. As per claim 24:

Roz teaches:

An anti-collision method as claimed in claim 22,

in which the Repeat command triggers the transponders to start a

new round. (Roz, fig. 5 Emission SHIFT 512 is the repeat command which

goes to 504 which asks if it is the end of a cycle or round. If it is the end of

the cycle and there are collusions detected then the process starts again

on 502 emitting the INT signal which starts the next round. **)**

25. As per claim 25:

Roz teaches:

An anti-collision method as claimed in claim 22, **in which the reading device sends a Next Time Slot command**, (Roz, Fig.5 step 508 determines if there is a response from a tag.) **if no transponder responds within a time slot,** (Roz, Fig.5 and Fig.7b to the right "non" means no. Meaning if there is no REP which is the response from the transponder the cycle goes to triggering the SHIFT to get to the next time slot.) **where the Next-Time slot command is preferably sent in a data frame with synchronization information.** (Roz, Fig. 5 "to emit a signal of interrogation (INT) allowing synchronization of the aforesaid transponders (TRj)." INT also shown in figure 7b which is the synch frame. After no transponder has been detected the flow chart goes back to INT which is the synchronization frame.)

26. As per claim 26:

Roz teaches:

An anti-collision method as claimed in claim 22, **in which the anti-collision method is scheduled if no transponder responds within a round.** (Roz, Fig.5 If no transponders respond in 508 then that signal gets sent to 504 which asks if it is the end of the round in which case triggers 502 which sends out INT frame which is used for synchronization.)

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-2, 4, 5, 9, 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over 5,940,006 to MacLellan el al, and further in view of patent number

6,430,209 to Shigyo et al.

MacLellan teaches:

1. As per claim 1:

An RFID device for non-contact communication with other RFID devices of an

RFID system (MacLellan, Fig.1 Interrogator is the RFID device or reader and Tags 102-

1 to Ns are the devices.)

by means of modulated electromagnetic signals (SS), (MacLellan, Abstract: A Time

Division Multiple Access (TDMA) duplex radio communication system uses an

Interrogator to generate a first radio signal by modulating a first information signal onto

a radio carrier signal which is sent to at least one remote Tag of the system.")

which contain data and or commands packed in data frames, (MacLellan, FIG. 5

expands the PAMA method shown in FIG. 4 in which a specific Tag is sent a command

and/or data;)

in which a group of data frames contains synchronization information (Preamble,

Start Delimiter) for synchronization of mutually communicating RFID devices,

(MacLellan, Fig.2 Sync 201 (Preamble) and OpCode (Delimiter) 202 together form the

group of data frames.) **and another group of data frames does not contain any such**

synchronization information, (MacLellan, Fig.2 Mode 1 and Mode 2 and Mode N.,"

Also in figure 1 showing more than one transponder.)

with synchronizing means configured to effect synchronization of the RFID

device (MacLellan, Fig.9 the transponder detector with the processor having a fixed

clock gives the sync means.)

by synchronizing information (Preamble, Start Delimiter) contained in received

data frames (MacLellan, Fig.1 and 2 Downlink signal is to synchronize. The received

frames are in the downlink signal going from the interrogator to the tag. Fig.9 the

transponder detector with the processor having a fixed clock gives the sync means.

Where sync is preamble and OpCode is Start Delimiter)

from which it receives data frames, (MacLellan, Fig.2 uplink signal 105. Receiving

data frames from transponder.)

MacLellan does not teach:

and with synchronization status test means configured to detect whether the

RFID device runs synchronously with at least one other RFID device of the RFID

system,

and in the event of not running synchronously to switch on the synchronizing

means in which event the synchronizing means can preferably be switched off

automatically after the synchronization has been effected.

Shigyo Teaches:

and with synchronization status test means configured to detect whether the

RFID device runs synchronously with at least one other RFID device of the RFID

system, (Shigyo, Column 3-4, lines 66-67, Column 4 line 1 "Then ID certifying process

is driven whether the ID of the present apparatus agrees with the ID carried by the sync-

recovered signal in order to identify the signal." ID of present apparatus is "one other

RFID device" and is testing against the sync signal.)

and in the event of not running synchronously to switch on the synchronizing

means in which event the synchronizing means can preferably be switched off

automatically after the synchronization has been effected. (Shigyo, Fig.2 Step

12 to Step 19 if synchronization is present then there is no need for extra

synchronization. If there is no synchronization then the synchronization is

started in Step 13.)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Shigyo's teachings of shutting sync means off as an added feature of the RFID device of MacLellan.

The teachings Shigyo would be combined with MacLellan to reduce power consumption of the RFID device and therefore be more efficient.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of MacLellan and Shigyo to obtain the invention of claim 1.

2. As per claim 2:

MacLellan and further in view of Shigyo teach:

An RFID-device as claimed in claim 1, (Refer to claim 1 rejection)

in which the synchronizing means are configured in such a manner

that every received data frame is to be treated as a data frame

containing synchronization information. (MacLellan, Fig.1 and 2 The only

other signal being received is a constant wave CW 104 which is not a data frame. The

only data frames being transmitted are the SYNC 201 and Op Code which go into

synchronization means fig.9.)

4. As per claim 4:

MacLellan and further in view of Shigyo teach:

An RFID device as claimed in claim 3,

in which the synchronization status test means are configured to

switch off the synchronizing means in the event of a correctly

received data frame. (Shigyo, Fig.2 Step 12 to Step 19 if synchronization

is present then there is no need for extra synchronization meaning

synchronization means is off. If there is no synchronization then the

synchronization is started in Step 13.)

5. As per claim 5:

MacLellan and further in view of Shigyo teach:

An RFID device as claimed in claim 1,

in which the synchronization status test means (Shigyo, fig.2 Step 12

to "ID agreement".) **are configured for detection of the synchronization**

start signals in the received electromagnetic signals, (Shigyo, fig.2

"Sync acquisition?" Step 12 is part of the status test means and in Step 11

"Communication in progress?" is the start signal of the synchronization.)

which synchronization start signals are transmitted outside the data

frame, (Shigyo, fig.2 Step 11 is outside of the sync command which is the

data frame.) **where the synchronization status test means switch on**

the synchronizing means on detection of a synchronization start

signal. (Shigyo, fig.2 In Step 11 if communication is in progress then the

flow chart goes to Step 12 Synch acquisition which is the start of the

synchronizing.)

9. As per claim 9:

MacLellan and further in view of Shigyo teach:

An RFID-device as claimed in claim 1, (Refer to claim 1 rejection)

comprising synchronization status test means (Shigyo, Column 3-4, lines

66-67, Column 4 line 1 "Then ID certifying process is driven whether the ID of the

present apparatus agrees with the ID carried by the sync-recovered signal in order to

identify the signal." ID of present.) **and two synchronizing means,** (MacLellan,

Fig.9 906 and 907.) **which can be run alternately in such a manner that**

one of the synchronizing means process every received data frame as

a data frame containing synchronization information and try to read

their synchronization information (Preamble, Start Delimiter) for

executing a synchronization routine, (MacLellan, Fig.9 106 Frequency

synthesizer.) **while the other synchronizing means forward every**

received data frame to the next data frame processing means, (Fig.9

905 to 907 is taking the Data to the next processing means.) **where the**

operation of the two synchronization means is switched over if a

synchronization routine of a synchronization unit is successful.

(MacLellan, Fig.9 907 to 902.)

10. As per claim 10:

MacLellan and further in view of Shigyo teach:

An RFID-device as claimed claim 1,

in which the RFID-device is configured as a reading device or

transponder. (Mclellan, fig.1 Interrogator 101 is configured as a reading

device and Tags 102-1 is configured as a transponder.)

15. A per claim 15:

MacLellan and further in view of Shigyo teach:

An RFID system as claimed in 1 (Refer to

in which the reading device is configured to send synchronization

start signals as electromagnetic signals before data frames

containing synchronization information, (Shigyo, fig.2 "Sync

acquisition?" Step 12 is part of the status test means and in Step 11

"Communication in progress?" is the start signal of the synchronization.)

and the synchronization status test means (Shigyo, fig.2 Step 12 to "ID

agreement".) **of the transponder are configured for detecting the**

synchronization start signals in the received electromagnetic signals

(Shigyo, fig.2 "Sync acquisition?" Step 12 is part of the status test means

and in Step 11 "Communication in progress?" is the start signal of the

synchronization.) **and to switch on the synchronization means on**

detection of a synchronization start signal. (Shigyo, fig.2 In Step 11 if

communication is in progress then the flow chart goes to Step 12 Synch

aquisition which is the start of the synchronizing.)

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 11, 12, 14, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over 5,940,006 to MacLellan el al, and further in view of patent number 6,430,209 to

Shigyo et al.

11. As per claim 11:

MacLellan teaches:

An RFID system, comprising at least one reading device and at least

one transponder (MacLellan, Fig.1 Interrogator is the RFID device or reader and

Tags 102-1 to Ns are the devices.) **which are configured for non- contact**

communication by means of modulated electromagnetic signals

which contain data and or commands packed in data frames,

(MacLellan, Abstract: A Time Division Multiple Access (TDMA) duplex radio

communication system uses an Interrogator to generate a first radio signal by

modulating a first information signal onto a radio carrier signal which is sent to at least

one remote Tag of the system." FIG. 5 expands the PAMA method shown in FIG. 4 in

which a specific Tag is sent a command and/or data;)

in which the reading device is configured for transmitting a group of

data frames which contain synchronization information (Preamble,

Start Delimiter) for synchronization with the transponder and to

transmit another group of data frames which do not contain such

synchronization information, (MacLellan, Fig.2 Mode 1 and Mode 2 and Mode

N.," Also in figure 1 showing more than one transponder. MacLellan, Fig.2 Sync 201

(Preamble) and OpCode (Delimiter) 202 together form the group of data frames.)

in which the transponder has synchronization means which are

configured to effect synchronization with the reading device with the

help of synchronization information (Preamble, Start Delimiter)

contained in received data frames (MacLellan, fig.9 Detector, Clock Recovery

and Processor of the transponder.)

MacLellan does not teach:

and synchronization status test means configured for detecting

whether the transponder runs synchronously with the reading device

and in the event of it not running synchronously to switch on the

synchronization means where the synchronization means can

preferably be switched off automatically on successful

synchronization.

Shigyo teaches:

and synchronization status test means configured for detecting

whether the transponder runs synchronously with the reading device

(Shigyo, Column 3-4, lines 66-67, Column 4 line 1 "Then ID certifying process is driven

whether the ID of the present apparatus agrees with the ID carried by the sync-

recovered signal in order to identify the signal." ID of present.)

and in the event of it not running synchronously to switch on the

synchronization means where the synchronization means can

preferably be switched off automatically on successful

synchronization. (Shigyo, Fig.2 Step 12 to Step 19 if synchronization is

present then there is no need for extra synchronization. If there is no

synchronization then the synchronization is started in Step 13.)

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Shigyo's teachings of shutting sync means off as an added feature of the

RFID device of MacLellan.

The teachings Shigyo would be combined with MacLellan to reduce power consumption

of the RFID device and therefore be more efficient.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the

teachings of MacLellan and Shigyo to obtain the invention of claim 11.

12. As per claim 12:

MacLellan and further in view of Shigyo teach:

An RFID system as claimed in claim 11, (Refer to claim 11 rejection)

in which the reading device is configured to register the inventorizing

(not mentioned before) commands, (MacLellan,[004] Radio Frequency

Identification (RFID) systems are used for identification and/or tracking of

equipment, inventory, or living things.) **by which each transponder**

present in an effective area of the reading device, (MacLellan, Detailed

description: (4) "In other applications, RFID Tags may be attached to every

item on the shelves of supermarkets, and these RFID Tags interrogated as

the shopping cart is passed under (or through) an Interrogator reading field.

In this application, far beyond 50 Tags may need to be in the reading

field.") **is asked to report to the reading device to send in a data frame**

containing synchronization information. (MacLellan, Fig.1 Uplink signal

105 is sending back the Tag ID which can be considered synchronization

information.)

14. As per claim 14:

MacLellan and further in view of Shigyo teach:

An RFID system as claimed in claim 13 (Refer to claim 13 rejection)**,**

in which the synchronization status test means are configured to

switch off the synchronizing means in the event of a correctly

received data frame. (Shigyo, Fig.2 Step 12 to Step 19 if synchronization

is present then there is no need for extra synchronization meaning

synchronization means is off. If there is no synchronization then the

synchronization is started in Step 13.)

19. As per claim 19:

MacLellan and further in view of Shigyo teach:

An RFID system as claimed in claim 11, **comprising synchronization**

status test means (Shigyo, Column 3-4, lines 66-67, Column 4 line 1 "Then ID

certifying process is driven whether the ID of the present apparatus agrees with the ID

carried by the sync-recovered signal in order to identify the signal." ID of present.)

and two synchronizing means (MacLellan, Fig.9 906 and 907.) **which**

can be run alternately in such a manner that one of the synchronizing

means processes every received data frame as a data frame

containing synchronization information and tries to read their

synchronization information for executing a synchronization routine,

(MacLellan, Fig.9 106 Frequency synthesizer.) **while the other**

synchronizing means forwards every received data frame to the next

data frame processing means (MacLellan,Fig.9 905 to 907 is taking the

Data to the next processing means.) **where the operations of the two**

synchronization units are switched over if a synchronization routine

of one synchronization means is successful. (MacLellan, Fig.9 907 to

902.)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 3, 8, 13, 18 rejected under 35 U.S.C. 103(a) as being unpatentable over

patent number 5,940,006 to MacLellan el al in view of reference patent number

6,430,209 to Shigyo et al as applied to claims 1 and 11 above, and further in view of

publication number 20030003942 to Okumura.

3. As per claim 3:

MacLellan and Shigyo teach:

An RFID device as claimed in claim 1,

Shigyo teaches:

in which the synchronization status test means (Shigyo, Column 3-4,

lines 66-67, Column 4 line 1 "Then ID certifying process is driven whether

the ID of the present apparatus agrees with the ID carried by the sync-

recovered signal in order to identify the signal." ID of present apparatus is

"one other RFID device" and is testing against the sync signal.)

to switch on the synchronizing means. (Shigyo, Fig.2 Step 12 to Step 19

if synchronization is present then there is no need for extra

synchronization. If there is no synchronization then the synchronization is

started in Step 13. The error rate measurement)

MacLellan and Shigyo do not teach:

to cooperate with a data frame error counter to count the number of

erroneously received data frames

and in the event of exceeding of a specified error limit,

Okumura teaches:

to cooperate with a data frame error counter to count the number of

erroneously received data frames (Okumura, fig. 4 and fig.5 flow chart.

" [0056] If there is an error (YES in S3), the counter increments the number

of error frames by +1 (S4). The error counting is being done by the error

rate measurement unit 123 is fig.4) **and in the event of exceeding of a**

specified error limit, (Okumura,[0057] "a frame error rate (FER=ratio of

the number of error frames to the number of received frames) is calculated

from the currently obtained received frames and the error frames (S7). The

calculated FER is output from the error rate measuring unit 123,")

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Okumura's teachings of having an error counter in Shigyo's receiver to

measure how many error frames are received. Further also to have Okumura's error

rate measurement device inside of Shigyo's receiver to have a way of calculating the

error limit.

The teachings Shigyo would be combined with Okumura to be able to have the

synchronization means off while the receiver is receiving synchronized data frames

therefore saving power.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the

teachings of Okumura and Shigyo to obtain the invention of claim 3.

8. As per claim 8:

MacLellan and further in view of Shigyo and Okumura teach:

An RFID-device as claimed in claim 1, (Refer to claim 1 rejection)

in which the synchronization status test means operate (Shigyo,

Column 3-4, lines 66-67, Column 4 line 1 "Then ID certifying process is

driven whether the ID of the present apparatus agrees with the ID carried

by the sync-recovered signal in order to identify the signal." ID of present

apparatus is "one other RFID device" and is testing against the sync

signal.)

with a Watchdog- Timer (Okumura, "Then, timer process for timing a

predetermined time is started (S33), and the counter value N is

incremented by +1 when the time is up (S34). The timing (S33) and the

increment (S34) are repeated during the idle period (YES in S13), and the

counter value N is incremented one by one every predetermined time

interval.")

to switch on the synchronizing means (Shigyo, Fig.2 Step 12 to Step 19

if synchronization is present then there is no need for extra

synchronization. If there is no synchronization then the synchronization is

started in Step 13.)

at the lapsing of a specified interval, (Okumura, "Then, timer process for

timing a predetermined time is started (S33), and the counter value N is

incremented by +1 when the time is up (S34). The timing (S33) and the

increment (S34) are repeated during the idle period (YES in S13), and the

counter value N is incremented one by one every predetermined time

interval.") **during which no correct data frame could be received.** (,

(Okumura,[0057] "a frame error rate (FER=ratio of the number of error

frames to the number of received frames) is calculated from the currently

obtained received frames and the error frames (S7). The calculated EFR is

output from the error rate measuring unit 123," The FER is computed from

error frames.)

13. As per claim 13:

MacLellan and further in view of Shigyo and Okumura teach:

An RFID system as claimed in claim 11, in which the synchronization status test means operate with a data frame error counter to count the number of erroneously received data frames (Okumura, fig. 4 and fig.5 flow chart. " [0056] If there is an error (YES in S3), the counter increments the number of error frames by +1 (S4). The error counting is being done by the error rate measurement unit 123 is fig.4) **and in the event of exceeding of a specified error limit, to switch on the synchronizing means.** (Okumura,[0057] "a frame error rate (FER=ratio of the number of error frames to the number of received frames) is calculated from the currently obtained received frames and the error frames (S7). The calculated EFR is output from the error rate measuring unit 123,")

18. As per claim 18:

MacLellan and further in view of Shigyo and Okumura teach:

An RFID system as claimed in claim 11, (Refer to claim 11 rejection)

in which the synchronization status test means operate (Shigyo,

Column 3-4, lines 66-67, Column 4 line 1 "Then ID certifying process is

driven whether the ID of the present apparatus agrees with the ID carried

by the sync-recovered signal in order to identify the signal." ID of present

apparatus is "one other RFID device" and is testing against the sync

signal.)

with a Watchdog- Timer, (Okumura, "Then, timer process for timing a

predetermined time is started (S33), and the counter value N is

incremented by +1 when the time is up (S34). The timing (S33) and the

increment (S34) are repeated during the idle period (YES in S13), and the

counter value N is incremented one by one every predetermined time

interval.")

to switch on the synchronizing means (Shigyo, Fig.2 Step 12 to Step 19

if synchronization is present then there is no need for extra

synchronization. If there is no synchronization then the synchronization is

started in Step 13.) **alter the lapsing of a specified interval,** (Okumura,

"Then, timer process for timing a predetermined time is started (S33), and

the counter value N is incremented by +1 when the time is up (S34). The

timing (S33) and the increment (S34) are repeated during the idle period

(YES in S13), and the counter value N is incremented one by one every

predetermined time interval.") **during which no or no correct data frame**

could be received. (Okumura,[0057] "a frame error rate (FER=ratio of the

number of error frames to the number of received frames) is calculated

from the currently obtained received frames and the error frames (S7). The

calculated EFR is output from the error rate measuring unit 123," The FER

is computed from error frames.)

Allowable Subject Matter

8.   Claims 6-7, 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANTIAGO GARCIA whose telephone number is (571)270-5182. The examiner can normally be reached on MONDAY- FRIDAY 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000. /SG/

/Pankaj Kumar/

Supervisory Patent Examiner, Art Unit 4147